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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,782	06/28/2001	Edward S. Hoskins	STL9980/40046.0154USU1	8895

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EXAMINER
COLON, ROCIO

ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>28 June 2001</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-8 and 12-30</u> is/are rejected.

7) ☒ Claim(s) <u>9-11</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>28 June 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application (PTO-152)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) ☐ Other: .

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

1.   Claims 28 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2.   Claims 28 and 29 recites the limitation "the count". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-8 and 12-27 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Igari et al. (USPN 6,523,142).

Regarding claim 1, Igari et al. disclose a method for accessing a data segment recorded on a track on a data storage disc in a disc drive, the disc having one or more tracks with a plurality of sequentially arranged data sectors accessible by a read/write head, the method comprising steps of:

accessing a target sector of the data segment and reading data stored on the target sector via the read/write head (column 12, line 53, the CPU moves the head toward the sector to be read, then read the information);

accessing each additional sector of the data segment in ascending order from the target sector and reading data stored on each additional sector via the read/write head (column 12, lines 53-54)

generating an instruction list such that the instruction list identifies each sector of the data segment on which an error is encountered (column 12, lines 56-57); and

executing a read error recovery procedure enabling data from each sector on which an error was encountered to be accessed during a single revolution of the disc as the disc is accessed by the read/write head (column 12, line 67 and column 13, lines 1, when the CPU determines that an error has occurred, wait for a single revolution of the disc before attempting to retry reading the error sector.).

Regarding claim 15, Igari et al. disclose a disc drive having a data storage disc having one or more tracks thereon with a plurality of sequentially arranged data sectors accessible by a

read/write head, a method for reading data in a data segment on the disc comprising steps of:

performing an initial read of the data segment during a first access of the track wherein a plurality of errors may be encountered on a plurality of sectors of the data segment as the data segment is being initially read (column 12, lines 53-54); and

during a single revolution of the track and a subsequent access of the data segment (column 12, lines 63-67 and column 13 line 1), performing a re-read of the data recorded on each sector of the data segment on which an error was encountered (column 12, line 67 and column 13, lines 1, when the CPU determines that an error has occurred, wait for a single revolution of the disc before attempting to retry reading the error sector.).

Regarding claim 21, Igari et al. disclose a system for re-reading data sectors of a data segment recorded on a track on a data storage disc, the system comprising:

a formatter regulating a transfer of data between data sectors on the track accessed by a transducer and buffer sectors in a buffer (column 12, lines 41-42, the HDC controls the data transferred to the buffer)

control means for identifying each sector of the data segment to be read by the transducer, the control means identifying the sectors on which an error was encountered during a previous access of the track (column 13, lines 11-12)

Regarding claim 26, Igari et al. disclose a disc drive having a data storage disc, an actuator for positioning a transducer over the data storage disc and a disc controller for communicating with a host computer, controlling position of the actuator and controlling access to sequentially arranged data sectors on tracks on the data storage disc, the disc drive comprising:

a buffer having sequentially arranged buffer sectors (Fig. 10, element 10 and column 12, line 42);

a read/write channel receiving data retrieved from the disc by the transducer (column 5, lines 30-31);

an interface between the read/write channel and the buffer, the interface transmitting data read through the read/write channel to the buffer sectors of the buffer (column 1, lines 27-32);

a formatter between the interface and the read/write channel for timing when data is transferred between the interface and the read/write channel (column 1, lines 65-66);

a buffer manager building and updating a vector buffer manager list which indicates an order in which the buffer may be accessed (Fig. 10, element 10); and

a skip mask mechanism operably connected to the formatter providing an instruction list directing the formatter whether to enable a passage of data between the interface and the read/write channel for each sequentially accessed sector on a data segment being read pursuant to a read command from the host computer (column 11, lines 27-28).

Regarding claim 16, Igari et al. disclose all the limitations of claim 15 upon which claim 16 depends, wherein the performing step comprises:

accessing a target sector of the data segment and reading data stored on the target sector via the read/write head (column 12, line 53);

accessing each additional sector of the data segment in ascending order from the target sector and reading data stored on each additional sector via the read/write head (column 12, lines 53-54); and

generating an instruction list such that the instruction list identifies each sector of the data

segment on which an error is encountered (column 12, lines 56-57).

Regarding claims 2 and 17, Igari et al. disclose all the limitations of claims 1 and 16 upon

which claims 2 and 17 depends, wherein the executing step comprises steps of:

accessing a recovery target sector and reading data stored on the recovery target sector

via the read/write head, the recovery target sector being the sector of the data segment on which

an error was first encountered during data segment access by the read/write head (column 13,

line 1); and

during the read error recovery procedure, accessing one or more remaining sectors of the

data segment on which an error was encountered during data segment access by the read/write

head, the one or more remaining sectors being identified by the instruction list (column 13, lines

11-12).

Regarding claims 3 and 18, Igari et al. disclose all the limitations of claims 1 and 17 upon

which claims 3 and 18 depends, wherein the disc drive further includes a data buffer having

buffer (column 12, line 42) sectors therein and a formatter operatively connected to the data

buffer and the read/write head, the formatter being operable for regulating a transfer of data

between data sectors on the track and buffer sectors in the buffer (column 12, lines 41-42, the

HDC controls the data transferred to the buffer), wherein the instruction list is operable for

instructing the formatter to allow the transfer of data between the buffer sectors and the sectors

on the disc storing the data segment on which an error is encountered during access by the

read/write head and for instructing the formatter not to transfer data between buffer sectors and

the sectors on the disc storing the data segment on the track on which an error is not

encountered during access by the read/write head (column 12, lines 41-42).

Regarding claim 22, Igari et al. disclose all the limitations of claim 21 upon which claim

22 depends, wherein the control means comprises:

a skip mask operably connected to the formatter and operable to hold an instruction

list(column 11, lines 27-28), the instruction list being operable for instructing the formatter to

allow the transfer of data between the buffer sectors and the sectors on the disc storing the data

segment on which an error is encountered during the first and the subsequent access of the track

and for instructing the formatter not to transfer data between buffer sectors and the sectors on

the disc storing the data segment on the track on which an error is not encountered during the

first and the subsequent access of the track (column 12, lines 41-42)..

Regarding claim 4, Igari et al. disclose all the limitations of claim 3 upon which claim 4

depends wherein the disc drive further includes a skip mask operably connected to the formatter

and operable to hold the instruction list (column 11, lines 27-28).

Regarding claims 5 and 23, Igari et al. disclose all the limitations of claims 4 and 22 upon

which claim 5 depends, wherein the disc drive further includes a microprocessor and a vector

buffer manager list which indicates an order in which the buffer may be accessed (Fig. 10,

element 10).

Regarding claim 6, Igari et al. disclose all the limitations of claim 5 upon which claim 6

depends, further comprising a step of:

updating the vector buffer manager list to direct the transfer of data from each sector

of the data segment on which an error is encountered to a corresponding sector in the buffer

during the read error recovery procedure (Fig. 10, element 91).

Regarding claim 7, Igari et al. disclose all the limitations of claim 2 upon which claim 7

depends, wherein the executing step further comprises a step of:

updating the instruction list to identify each sector on which an error is encountered

during the single revolution of the disc (column 12, lines 63-67 and column 13, line 1).

Regarding claims 8 and 20, Igari et al. disclose all the limitations of claims 7 and 15

upon which claims 8 and 20 depends, further comprising a step of:

if an error is encountered during the read error recovery procedure, repeating the

executing step until each sector of the data segment is read from the disc (column 13, lines 11-

13)

Regarding claim 12, Igari et al. disclose all the limitations of claim 1 upon which claim

12 depends, wherein the accessing step is terminated as the read/write head accesses a final

sector of the data segment (column 12, lines 66-67).

Regarding claim 13, Igari et al. disclose all the limitations of claim 1 upon which claim

13 depends, wherein the accessing step is terminated as the read/write head accesses a single

revolution of the track (column 12, line 67 and column 13, line 1).

Regarding claims 14 and 25, Igari et al. disclose all the limitations of claims 1 and 21

upon which claims 14 and 25 depends , wherein the data segment includes audio/visual data

(column 8, line 43).

Regarding claim 19, Igari et al. disclose all the limitations of claim 18 upon which claim

19 depends, wherein the disc drive further includes a skip mask operably connected to the

formatter and operable to hold the instruction list (column 11, lines 27-28)., a microprocessor and a vector buffer manager list which indicates the order in which the buffer may be accessed (Fig. 10, element 10).

Regarding claim 30, Igari et al. disclose all the limitations of claim 26 upon which claim 30 depends, wherein the skip mask mechanism controls a read error recovery procedure re-reading data stored on one or more disc sectors(column 13, lines 11-12) as the transducer accesses the data segment during a single revolution of the disc following an initial access of the data segment during which an error was encountered on the one or more disc sectors (column 12, line 67 and column 13, lines 1-2, when the CPU determines that an error has occurred, wait for a single revolution of the disc before attempting to retry reading the error sector.).

Regarding claims 24 and 27, Igari et al. disclose all the limitations of claims 21 and 26 upon which claims 24 and 27 depends, further comprising: a data throttling mechanism operably connected between the buffer and a host computer, the data throttling mechanism being operable to regulate a transfer of data between the buffer and the host computer (column 12, lines 41-42).

Allowable Subject Matter

Claims 9-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rocio Colon whose telephone number is (703) 305-3947. The examiner can normally be reached on Mon-Thu 8:00a.m.-6:30p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass can be reached on (703)305-4717. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-6743 for regular communications and 703-308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

rcv
June 16, 2003

Richemond Dorvil
Primary Examiner